

Southern States Energy Board
2009
Annual Report

*Pathways to
Southern Energy Innovation*

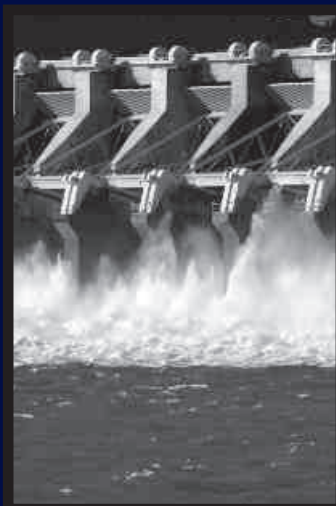




Through innovations in energy and environmental policies, programs and technologies, the Southern States Energy Board enhances economic development and the quality of life in the South.



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The Mission

The mission of the Southern States Energy Board is to enhance economic development and the quality of life in the South through innovations in energy and environmental policies, programs and technologies.

The Southern States Energy Board (SSEB) is a non-profit interstate compact organization, created in 1960 and established under Public Laws 87-563 and 92-440. Sixteen southern states and two territories comprise the membership of SSEB: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, U.S. Virgin Islands, Virginia and West Virginia. Each jurisdiction is represented by the governor and by a legislator from both the House and Senate. A governor serves as Chair, and legislators serve as Vice-chair and Treasurer. Ex-officio, non-voting board members include a federal representative appointed by the President of the United States, the Chair of the Southern Legislative Conference Energy and Environment Committee and SSEB's executive director, who serves as Secretary.

SSEB was created by state law and consented to by Congress with a broad mandate to contribute to the economic and community well-being of the southern region. The Board exercises this mandate through the creation of programs in the fields of energy and environmental policy research, development and implementation, science and technology exploration and related

areas of concern. SSEB serves its members directly by providing timely assistance to develop effective energy and environmental policies and programs and represents its members before governmental agencies at all levels.

LONG-TERM GOALS

- Perform essential services that provide direct scientific and technical assistance to state governments.
- Develop, promote and recommend policies and programs on energy, environment and economic development that encourage sustainable development.
- Provide technical assistance to executive and legislative policy-makers and the private sector in order to ensure energy security and supply.
- Facilitate the implementation of energy and environmental policies between federal, state and local governments and the private sector.
- Sustain business development throughout the region by eliminating barriers to efficient energy and environmental technologies.
- Support improved energy efficient technologies that pollute less and contribute to a clean global environment while protecting indigenous natural resources for future generations.



The Service

SSEB member states and their citizens receive significant financial and other value-added services as a result of membership in the non-profit interstate compact.

Participation by all member jurisdictions in the Southern States Energy Board is critical not only to the state but also to the region. All of the activities of the Board, as described in this Annual Report, benefit the southern states in the development of a sound economy, proper use and diversity of energy sources and increased industrialization, while providing for protection of the environment to ensure public health, safety and welfare. SSEB often undertakes state-specific projects with those same goals in mind.

- SSEB obtains funding for state and regional projects at the request of its membership, committees and working task forces. This funding provided to our states generally is far in excess of appropriations paid to SSEB by its members.
- SSEB negotiates collective funding for member states on programs that support energy and environmental research, education and training, technology development, regulatory reform and other key issue areas.
- SSEB funds the direct participation of state officials in projects and activities in order to enable states to remain current on new programs, trends and technologies while decreasing the impact of travel on member state budgets.

- SSEB works directly with businesses and industries on specific economic development projects that create and sustain jobs and expand the economy.

- SSEB provides regional forums, summits, conferences and workshops in member states that stimulate and promote economic development while facilitating peer and professional development.

- SSEB conducts training and professional development activities that address energy and environmental programs and technologies.

- SSEB conducts research and recommends solutions to specific issues at the request of member state officials and businesses.

- SSEB builds partnerships and encourages collaboration to maximize the expertise and experience needed to develop and implement the most effective approaches and strategies to address energy and environment matters impacting the South.

The Board

2008-2009 Executive Committee

Chairman	Governor Sonny Perdue, Georgia
Chairman Elect	Governor Joe Manchin, III, West Virginia
Vice Chairman	Representative Rocky Adkins, Kentucky**
Treasurer	Representative Myra Crownover, Texas

Members, Executive Committee

Governor Mike Beebe, Arkansas
Governor Tim Kaine, Virginia
Senator Robert Adley, Louisiana
Senator Thomas McLain Middleton, Maryland
Representative Harry Geisinger, Georgia
Representative Jim Ellington, Mississippi

Federal Representative	Pending Appointment*
Secretary	Kenneth J. Nemeth, Executive Director SSEB*

**Ex-Officio, Non-Voting Executive Committee Members*

*** Chair, SLC Energy & Environment Committee*

Members of the Board

Alabama

Governor Robert Riley
Senator Jimmy W. Holley
Representative William E. Thigpen, Sr.
Representative Pete Turnham, Emeritus, House
Alternate
Representative Randy Davis, Governor's
Alternate

Arkansas

Governor Mike Beebe
Senator Steve Faris
Senator Denny Altes , Senate Alternate
Representative Allen Maxwell
Mr. Marc Harrison, Governor's Alternate

Florida

Governor Charlie Crist
Senator Lee Constantine
Representative Clay Ford
Mr. Jeremy Susac, Governor's Alternate

Georgia

Governor Sonny Perdue
Senator David Shafer
Senator Mitch Seabaugh, Senate Alternate
Representative Harry Geisinger
Mr. Jimmy Skipper, Governor's Alternate

Kentucky

Governor Steve Beshear
 Senator Robert Stivers
 Representative Rocky Adkins
 Dr. Leonard K. Peters, Governor's Alternate

Louisiana

Governor Bobby Jindal
 Senator Robert Adley
 Representative Gordon E. Dove, Sr.
 Representative Noble Ellington, House
 Alternate
 Mr. William "Bill" Dore, Governor's Alternate

Maryland

Governor Martin O'Malley
 Senator Thomas McLain (Mac) Middleton
 Delegate Dereck E. Davis

Mississippi

Governor Haley Barbour
 Senator Nolan Mettetal
 Representative Jim Ellington
 Mr. Patrick Sullivan, Governor's Alternate

Missouri

Governor Jay Nixon
 Senator Kevin Engler
 Representative Ed Emery

North Carolina

Governor Bev Perdue
 Senator David W. Hoyle
 Speaker Joe Hackney
 Mr. Larry Shirley, Governor's Alternate

Oklahoma

Governor Brad Henry
 Senator David F. Myers
 Representative Weldon Watson
 Mr. J.D. Strong, Governor's Alternate

Puerto Rico

Governor Luis G. Fortuño
 Mr. José Rafael Díaz, House
 Legislative Counsel
 Mr. Luis Bernal, Governor's
 Alternate

South Carolina

Governor Mark Sanford
 Senator Lawrence Grooms
 Representative Jeffrey D. Duncan

Tennessee

Governor Phil Bredesen
 Senator Mark Norris
 Representative Gary Odom
 Mr. Ryan Gooch, Governor's Alternate

Texas

Governor Rick Perry
 Senator Kip Averitt
 Representative Myra Crownover
 Commissioner Michael L. Williams, Governor's
 Alternate

Virgin Islands

Governor John P. deJongh
 Mr. Bevan R. Smith, Jr., Governor's Alternate

Virginia

Governor Tim Kaine
 Senator John C. Watkins
 Delegate Harry R. Purkey
 Dr. Michael Karmis, Governor's Alternate

West Virginia

Governor Joe Manchin, III
 Senator Earl Ray Tomblin
 Senator Mike Green, Senate Alternate
 Delegate Harold Michael
 Mr. John F. Herholdt, Governor's Alternate

Federal Representative

Pending Appointment



*Sonny Perdue
Governor of Georgia
SSEB Chairman, 2008-2009*

The Message

As the Southern States Energy Board (SSEB) enters its fiftieth year as an organization created to transcend the boundaries of science, geography, politics, technology and socioeconomics, I present the 2009 Annual Report. In 1960, southern leaders had the foresight to recognize that with the rise of nuclear energy, southern states would need to address issues that did not adhere to state boundaries and that presented new challenges requiring regional solutions. Today, SSEB is at the forefront of developing partnerships and programs to help ensure that the South and the nation can continue to meet the technological challenges that will shape our future economy as energy and environmental demands grow and as our population increases.

This year SSEB joined with the Southern Governors' Association (SGA) to explore federal, regional and state programs and policies concerning climate change and energy independence. The goal of the initiative was to foster a dialogue among the states about the South's role in the debate on climate change, opportunities to mitigate the impact of climate change and prospects for regional collaboration.

Over the past 30 years, the South experienced tremendous growth in population, economic activity and energy demand. We met these challenges by providing safe and reliable energy and by supporting our region's high quality of life. In this regard, SSEB developed an inventory of best practices among states, utilities, universities, local governments and businesses in the South. These best practices can help states create policies that address the energy challenges facing our region today.

As our nation moves forward and meets new challenges, we must invest in the research and development of diverse energy resources if we are to sustain our way of life. Currently, SSEB is managing the Southeast Regional Carbon Sequestration Partnership (SECARB). SECARB's mission is to explore methods to capture and sequester greenhouse gases. This year the U.S. Department of Energy, Southern Company, SECARB and other organizations began a new phase of research to support the development of technologies for reducing greenhouse gas emissions. This collaboration is examining the scientific and regulatory boundaries of geologic sequestration of carbon dioxide. Such research partnerships illustrate the vital role the South plays in our nation's energy future.

I encourage you to read more about the Board's accomplishments in this year's Annual Report. The Southern States Energy Board is an organization that confronts the major energy issues facing our country each day, transcending boundaries to explore new opportunities and to craft innovative solutions. If this nation is to maintain a strong and balanced energy policy, then we must address a number of key issues, including energy independence, climate change and national security. All of these areas are inextricably tied to our economy, our environment and the quality of life of our citizen:



Sonny Perdue
Governor of Georgia
SSEB Chairman, 2008-2009

The Events

2008 SSEB Annual Meeting



Left: Governor Joe Manchin, III, West Virginia

Left to Right: Representative Allen Maxwell, Arkansas, Mr. Jeremy Susac, Florida



Left to Right: Governor Phil Bredesen, Tennessee, Governor Tim Kaine, Virginia



Left: Mr. James Connaughton, President's Council on Environmental Quality

Left to Right: Governor Joe Manchin, III, West Virginia, Representative Rocky Adkins, Kentucky



Left: Representative Myra Crownover, Texas

Left to Right: Mr. James Connaughton, President's Council on Environmental Quality, Mr. Andrew Parker, Arkansas Governor's Office, Representative Allen Maxwell, Arkansas



2008 SSEB Annual Meeting continued

Left: Mr. James Slutz, Assistant Secretary, U.S. Department of Energy

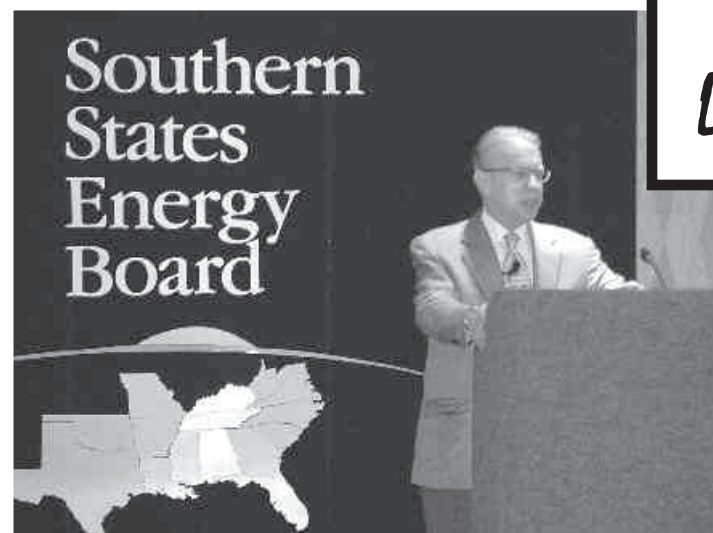


Left to Right: Governor Tim Kaine, Virginia, Representative Rocky Adkins, Kentucky

Right: Mr. Clifford May, Foundation for Defense of Democracies



2008 SSEB Legislative Briefing



Left: Mr. David Fleischaker, Oklahoma Secretary of Energy



Right: Mr. Greg Pauley, American Electric Power



Left to Right: Senator Jeff Rabon, Oklahoma, Representative Rocky Adkins, Kentucky

Left: SSEB Legislative Briefing at the Southern Legislative Conference



SECARB 2009 Stakeholders Briefing



*Left: Governor Sonny Perdue,
Georgia, Chairman, SSEB*



*Above: Mr. Richard Esposito, Southern
Company*



*Left: Mr. George Koperna, Advanced Re-
sources International, Inc.*



*Left to Right: Mr. Dwight Peters,
Mr. John Tombari, Schlumberger*

Below: Mr. Bruce Lani, U.S. Department of Energy - National Energy Technology Laboratory



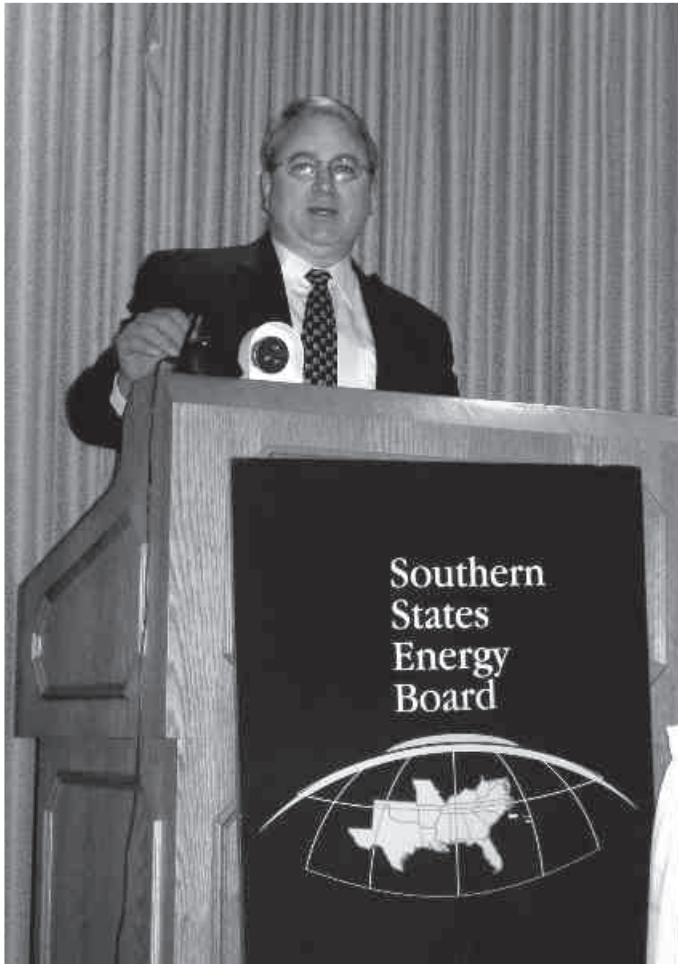
Left: Mr. Tom Fanning Chief Operating Officer, Southern Company



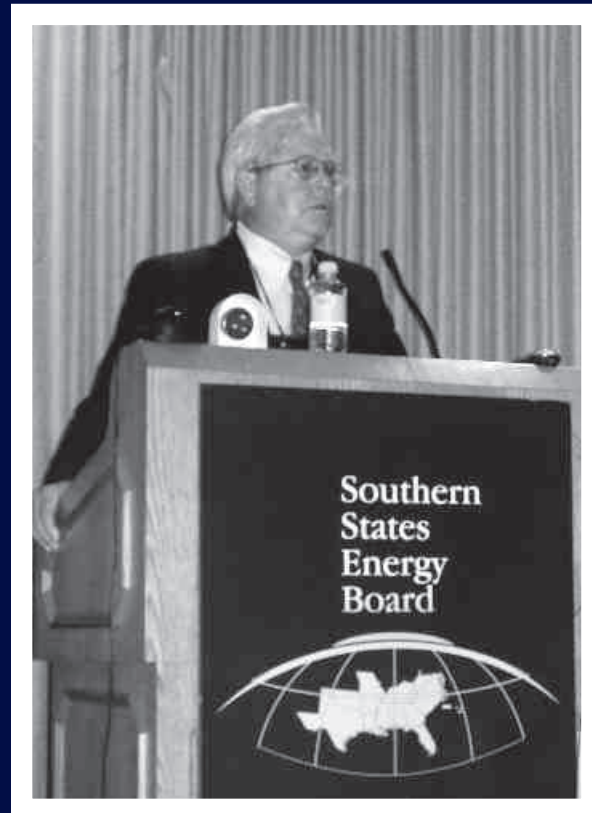
Above (Left to Right): Mr. Ken Nemeth, Executive Director, SSEB, Governor Sonny Perdue, Georgia

Left: Mr. Richard Rhudy, Electric Power Research Institute

SSEB Clean Coal and Energy Technologies Collaboration Committee Meeting



Left: Mr. John Snider, Arch Coal



Right: Representative Allen Maxwell, Arkansas



Left: Mr. Greg Workman, Dominion Energy

Right: Ms. Barbara McKee, Office of Fossil Energy, U.S. Department of Energy



American Energy Security

Soaring energy prices, national security issues, and shortages of liquid transportation fuels led the Board to recommend an American Energy Security Study in 2005. An initial goal of the effort was to implement federal legislation to address the fiscal, tax, legislative and regulatory reforms needed to ensure stable, affordable and reliable liquid transportation fuels.

In July 2006, the Southern States Energy Board released the “American Energy Security Study.” This nationally acclaimed body of work included the development of a comprehensive plan for the United States to establish energy security and independence through the production of alternative liquid transportation fuels from our vast and diverse domestic resource base, including coal, biomass, and oil shale. The plan also emphasized significantly increasing domestic oil production and sequestering carbon using CO₂ Enhanced Oil Recovery (EOR), where carbon dioxide is injected underground into mature and declining oil fields to mobilize stranded oil.

At its 2008 Annual Meeting, the Southern States Energy Board decided to follow up the initial Study with research focusing on four areas: voluntary rapid deployment of transportation fuel efficiency technologies, defining U.S. resources that can meet the challenge, assessing the adequacy of electric generating capacity, and climate change issues impacting the South.

Since the advent of the study, significant events have verified those warning signs that initially compelled the Board to recommend such an undertaking. The United States has continued to import more oil from unstable and unfriendly foreign nations. In July 2008, the price of oil reached \$144 per barrel, with Americans paying over four dollars per gallon. Despite this fact, the country has not implemented a comprehensive energy plan to displace foreign oil by using the tremendous portfolio of available resources and clean technologies. More recently the nation also has begun to fall short in the development of adequate new base load electric generating capacity and infrastructure to meet anticipated future U.S. electricity needs. Thus, some experts believe that regional electricity shortages are imminent, elevating the impending utility “reserve margin” crisis to a critical level.

Clean energy alternatives and renewable resources and technologies can provide for future fuel, electricity, and process and space heat requirements over the next several decades, including petrochemical feedstocks. However, the role of renewables is limited and must be considered in concert with proven baseload energy technologies and fuels that enhance economic development and the quality of life in the South. If American leadership elects to depend solely on renewables prematurely, and abandons abundant, low cost fossil fuels, there is

concern that American energy prices will spiral even higher, and damaging supply shortages will occur. Relying on any subset of American energy resources will not be enough. We need them all to maintain reasonable prices and provide secure supplies, if we are to remain competitive in the global economy.

The “American Energy Security Study II” will present a strategic action plan and an all-encompassing set of recommendations and solutions to serve as an energy supply blueprint for the country. The study will provide an aggressive, comprehensive, and realistic road map for America to rapidly transition from risky and costly oil import dependence and impending electricity shortages to real energy security and independence, using our vast conventional and alternative domestic energy resources and clean energy technologies. Implementation of the AES plan will result in numerous benefits including lower energy costs.

“American Energy Security Study II” will examine the potential domestic sources of energy, the production of liquid fuels, electricity, process and space heat, and

petrochemical feedstocks. Promising approaches to energy efficiency and sensible voluntary conservation measures will be incorporated, as will a broad set of public and private sector recommendations, including suggestions on policy. All of this will be available early 2010.

The Southern States Energy Board is highly indebted to its partners in this effort, including the U.S. Department of Energy and the National Energy Technology Laboratory, A.J. Mayer International, Blue Source and Leonardo Technologies, Inc. Without their support and valuable research and collaboration, this study would not be possible.



Carbon Management

The Southeast Regional Carbon Sequestration Partnership, or SECARB, is a program underway at the Southern States Energy Board to define the role for clean coal in a carbon constrained world and balance the environmental effects of existing and prospective power generating facilities. While many of our nation's leaders are working hard to ensure that coal continues to contribute to this country's economic growth and homeland security, it is evident that carbon capture and sequestration technologies have a dominant role in that future. SECARB is a \$130 million multi-state program established in 2003 and managed by SSEB. The project focuses on characterizing the geology of a 13-state region, matching major sources of carbon emissions with geologic sequestration sites, determining the most promising options for commercial deployment of carbon sequestration technologies in the South and validating and developing the technology options with carefully executed field testing through 2017. SECARB is one of seven regional partnerships nationwide and co-funded by the U.S. Department of Energy and SECARB partners.

Since 2003, over 100 stakeholders and participants have been involved in the program. The Partnership receives approximately 70 percent of its funding from DOE's National Energy Technology Laboratory and the other 30 percent is provided by cost share partners, currently representing 64 organizations. Each year SECARB has

an annual briefing in Atlanta, and the Fourth Annual SECARB Briefing in March of 2009 attracted over 100 industry, government, academic and non-profit participants.

The SECARB program is divided into three phases:

Phase I: Characterization

Phase I (2003-2005) focused on characterizing the geology and potential terrestrial sequestration options in the Southeast, culminating in the development of an action plan for small-scale geologic carbon sequestration field demonstrations.

Phase II: Validation

SECARB currently is in its final year of a four-year Phase II Validation program (2005-2009). The team is implementing the action plan from Phase I and validating various technologies with small-scale injections in the field. Phase II includes field tests in four locations.

Gulf Coast Stacked Storage Project

Enhanced oil recovery (EOR) stacked formations along the Gulf Coast are a prime target area for geologic storage of carbon dioxide. Sequestration in these formations can help the U. S. reach future national emissions reduction targets. SECARB's research estimated 34 billion metric tonnes of potential storage capacity in the region's depleted oil and natural gas fields.

Right: More than 30 participants gathered for an Open House at the SECARB Saline Reservoir Field Test to witness CO₂ injection operations first-hand on October 15, 2008.

Below: Satellite uplink of real-time data is transmitted every ten seconds to researchers at the University of Texas at Austin for monitoring and analysis.



use of underlying or adjacent brine-bearing formations for large-volume, long-term storage.

Saline Reservoir Field Test: Mississippi Test Site

Saline formations are the primary CO₂ geologic storage options for the SECARB region because so many underlie power plants in the area. In fact, SECARB's research estimated a total of 2,274 billion metric tonnes of potential sequestration in saline formations in the region underlie Alabama, Florida, Louisiana, Mississippi, East Texas, and Tennessee.

The Mississippi Test Site project was successfully conducted in October 2008 and examined a regionally significant deep saline reservoir for geological storage of CO₂. In this area, the Massive Sand Unit of the Lower Tuscaloosa Formation has been identified as a high capacity CO₂ storage option. Mississippi Power Company's Victor J. Daniel Power Plant, located near Escatawpa, Mississippi, was the site for the demonstration. The project team is led by the Electric Power Research Institute and Southern Company.

To assure a safe, secure and publicly accepted field test, the Mississippi Test Site project has provided the essential foundation of technical

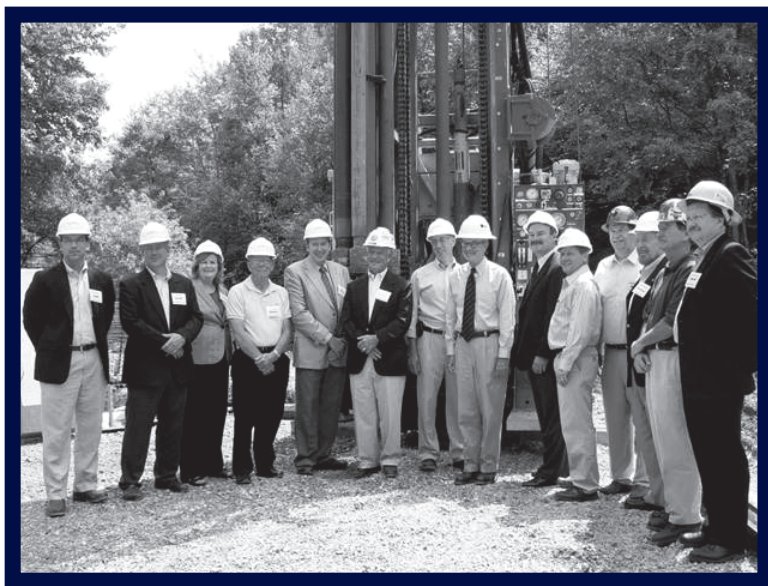
The Cranfield Oilfield in Southwest Mississippi, owned and operated by Denbury Resources, is the site of the Gulf Coast Stacked Storage Project. The Gulf Coast Carbon Center at The University of Texas at Austin leads the local effort for SECARB. Injection operations began at SECARB's Gulf Coast Stacked Storage Project in July 2008 and continue today. The objective is to demonstrate the concept of phased use of subsurface volumes, combining early use of CO₂ for enhanced oil recovery with later injection into underlying or adjacent brine formations. The advantages of this phased development are short-term, large-volume injection with immediate commercial benefit to support research and infrastructure development, followed by

knowledge for full-scale, commercial implementation of CO₂ storage activities. This includes: constructing geological and reservoir maps to further assess the site; conducting reservoir simulations to estimate CO₂ injection rates, storage capacity and long-term fate of injected CO₂; addressing state and local regulatory regimes for permitting the site; fostering public education and outreach to build acceptance; injecting up to 3,000 tons of CO₂; and conducting baseline and long-term monitoring to establish the security of the CO₂ plume.

Coal Seam Project: Central Appalachian Basin

Coal seams are among the most attractive potential CO₂ sinks occurring in the Southeastern United States, where a prolific coalbed methane industry, which has produced more than 2.3 trillion standard cubic feet (Tscf) of natural gas, is approaching maturity. CO₂ sequestration in unmineable coal seams can produce enhanced coalbed methane to help offset sequestration costs. An estimated 82.1 billion metric tonnes of potential storage capacity exists in the region's unmineable coal seams.

Here, there are two SECARB Phase II field tests. The first was completed in February 2009 and used an existing CNX Gas well located in Russell County, Virginia, for CO₂ injection. The Virginia Center for Coal and Energy Research at Virginia Tech managed this project. The second is managed by the Geological Survey of Alabama, with



Central Appalachian Coal Seam Project groundbreaking ceremony, August, 2005

El Paso Production and Exploration donating a well to the SECARB team for this field test. The site is located near Tuscaloosa, Alabama, and CO₂ injection is scheduled to begin this fall.

On August 18, 2008, Virginia Congressman Rick Boucher, jointly with the U.S. Department of Energy's Acting Assistant Secretary of Fossil Energy James Slutz, kicked-off the Central Appalachian Coal Seam Project as part of a successful groundbreaking event with local, regional and national stakeholders attending. Injection operations were conducted during January and February of 2009. The project met its objectives to assess the sequestration potential of coalbed methane reservoirs as geologic sinks; verify the sequestration capacity and performance of mature CBM reservoirs in the Central Appalachian Basin through injection falloff and production testing; and implement subsurface monitoring programs. These tests demonstrated that geologic sequestration into Appalachian coals to be a safe and permanent method to mitigate greenhouse gas emissions. The objectives of

the project are directly related to the following tasks: expanded geologic characterization; pilot site selection; reservoir modeling; corehole drilling and evaluation; pilot preparation and risk analysis; pilot testing and injection operations; data interpretation and assessment; and public outreach and technology transfer.

Black Warrior Basin Coal Seam Project

Similar to the demonstration in Central Appalachia, the principal objectives of the SECARB Black Warrior Basin Coal Seam Project are to determine if sequestration of CO₂ in mature coalbed methane reservoirs is a safe and effective method to mitigate greenhouse gas emissions and to determine if sufficient injectivity exists to efficiently drive CO₂ enhanced coalbed methane recovery. Coalbed methane is produced from multiple thin coal seams (0.3 to 2.0 meters) distributed through more than 300 meters of section in the Black Warrior Basin of Alabama. Coal is an extremely stress-sensitive rock type, and permeability can decrease by as much as four orders of magnitude from the surface to depths as shallow as 700 meters. Coal, moreover, is an extremely heterogeneous reservoir, and permeability can vary by more than an order of magnitude at a given depth. Accordingly, procedures and technologies need to be developed to manage reservoirs with properties that vary greatly from seam to seam. This field test is intended to be the first step in this process.

Phase III: Development

SECARB began a ten-year Phase III program in October 2007, to develop two large volume injection test projects in the lower Tuscaloosa Formation, a formation representative of the Gulf

Below: CO₂ Injection Well, Mississippi Test Site, October 2008



Coast wedge. The first project, or “Early Test,” will inject 1.4 million tonnes of CO₂ per year for 18 months. Phase III injection at Cranfield began in April 2009, using CO₂ transported by pipeline from a naturally occurring source (Jackson Dome) near Jackson, Mississippi and delivered by Denbury Resources’ CO₂ pipeline. The second project, or “Anthropogenic Test,” will inject approximately 150,000 tonnes of CO₂ per year for four years at the Citronelle Oilfield owned and operated by Denbury Resources near Citronelle, Alabama. Surface and subsurface monitoring of the CO₂ will continue for four



years following the injection. The CO₂ for the Anthropogenic Test will be supplied by a separately funded pilot unit capturing CO₂ from flue gas produced by Alabama Power Company’s Plant Barry coal-fired power plant, which is located approximately 10 miles from the injection site. Alabama Power Company is a subsidiary of Southern Company.



Above: Researchers conduct soil surveys during CO₂ injection at the Central Appalachian Coal Seam Project. (Photo: Virginia Center for Coal and Energy Research)

Left: Injection well at Central Appalachian Coal Seam Project, Russell County, Virginia



Left: Mr. Ilija Miskovic, Virginia Tech, monitors the air for CO₂ fluctuations during injection operations.

Right: CO₂ injection at the Central Appalachian Coal Seam field test. (Photo: Virginia Center for Coal and Energy Research)

Below: Local and regional stakeholders attend a field trip to witness injection operations at the Central Appalachian Coal Seam Project.



Clean Coal Collaboration

Composed of state and federal officials, utilities, industries, academia and business executives, the Southern States Energy Board's Committee on Clean Coal and Energy Technologies Collaboration advances opportunities for applied research and development, investment, international cooperation and technology design for coal in the southern region. During its tenure, the committee has been responsible for coupling the development of clean coal technologies with potential economic development opportunities.

This past May, in Kingsport, Tennessee, the East-

ern Coal Council and SSEB's Committee on Clean Coal and Energy Technologies Collaboration held a joint meeting to examine the issues related to carbon management and coal use in the South. The highlight of the conference was the keynote address by Governor Joe Manchin, III, of West Virginia, Chairman-Elect of the Southern States Energy Board. The Governor discussed legislation currently being considered at federal and state levels, including cap and trade and carbon taxes, and West Virginia's enactment of laws on carbon sequestration, land use planning, state building code updates, and alternative energy and renewable energy portfolio standards. Mountain top mining has been a serious issue for southern mining states, and the Governor has proposed the use of some of those sites for state facilities and renewable energy applications.

Resolving serious workforce issues are critical to the well-being of energy industries in the United States. During this year, the SSEB committee has continued to focus on the need for continuing education and training for mining personnel of the fu-

Left: John Snider, Arch Coal, presents at SSEB's Clean Coal and Energy Technologies Collaboration Committee in Kingsport, Tennessee



ture. Because almost one-half of the coal miners in the Southeast face retirement in the next five years, there is a critical need to centralize training efforts to stabilize the workforce while increasing mining productivity. The Kentucky Coal Academy, the West Virginia Coal Academy and targeted teacher programs by Virginia Tech have made excellent contributions to the development of a secure labor force for the coal industry.

The Southern States Energy Board maintains a productive partnership for examining issues related to coal and carbon management with the U.S. Department of Energy's Office of Coal and Power and the Office of Clean Coal and Energy Collaboration. International efforts, such as participation in the 23 nation Carbon Sequestration Leadership Forum, are coordinated with the Cleaner Fossil Fuel Systems Committee of the World Energy Council and the United States Energy Association. Similarly, SSEB sponsored the San Francisco meeting of the Carbon Sequestration Leadership Forum this June, where policy and technology discussions are leading to an international meeting of key energy ministers prior to the upcoming G-8

Summit. Through these relationships, SSEB's committee leverages U.S. resources to influence international opportunities for the deployment of advanced clean coal technologies that mitigate greenhouse gases and provide carbon sequestration solutions to reduce the effects of carbon dioxide emissions worldwide.

Below: Governor Joe Manchin, III of West Virginia, SSEB's Chair-elect, meets the press at the Eastern Coal Council Annual Meeting.



Biofuels, Biopower, Biobased Products

The South is uniquely positioned to convert a variety of second-generation cellulosic feedstocks into biofuels, which will maximize the region's indigenous resources such as agricultural and wood waste. In addition, southern states are fortunate, in that they are well positioned to cultivate new energy crops that are non-food sources and can provide sustainable, renewable energy resources for the future. At the same time, power producers are now using wood waste and other sources of biomass to generate electricity. Biobased products are becoming more abundant as markets are developing to find better alternatives for petroleum-based products. This movement is essential for meeting future renewable energy standards both at the state and federal levels.

The Southern States Biobased Alliance works in an advisory capacity to the Southern States Energy Board, addressing the development of biomass for energy within the southern region. The Alliance's mission is to provide leadership and develop strategies that will foster biobased industry and boost rural economies. Alliance membership is composed of both gubernatorial appointees from state legislatures representing SSEB member states, as well as representatives of the public or private sector who are active in energy, environment, agricultural and forestry issues. Key activities are focused on stimulating markets for biomass and learning about policies and incentives in other states.

This program, along with the Southeastern State/Regional Biomass Partnership, is integral to determining the proper approaches to stimulate economic development and provide solutions for growing energy demand while mitigating climate change. The regional biomass partnership is a U.S. Department of Energy program that



Left and Opposite: Mr. J.C. Bell of Bell Plantation Holdings explains their agricultural waste-to-oil system to Representative Harry Geisinger, Georgia, and Mr. Jim Powell, SSEB Senior Policy Advisor

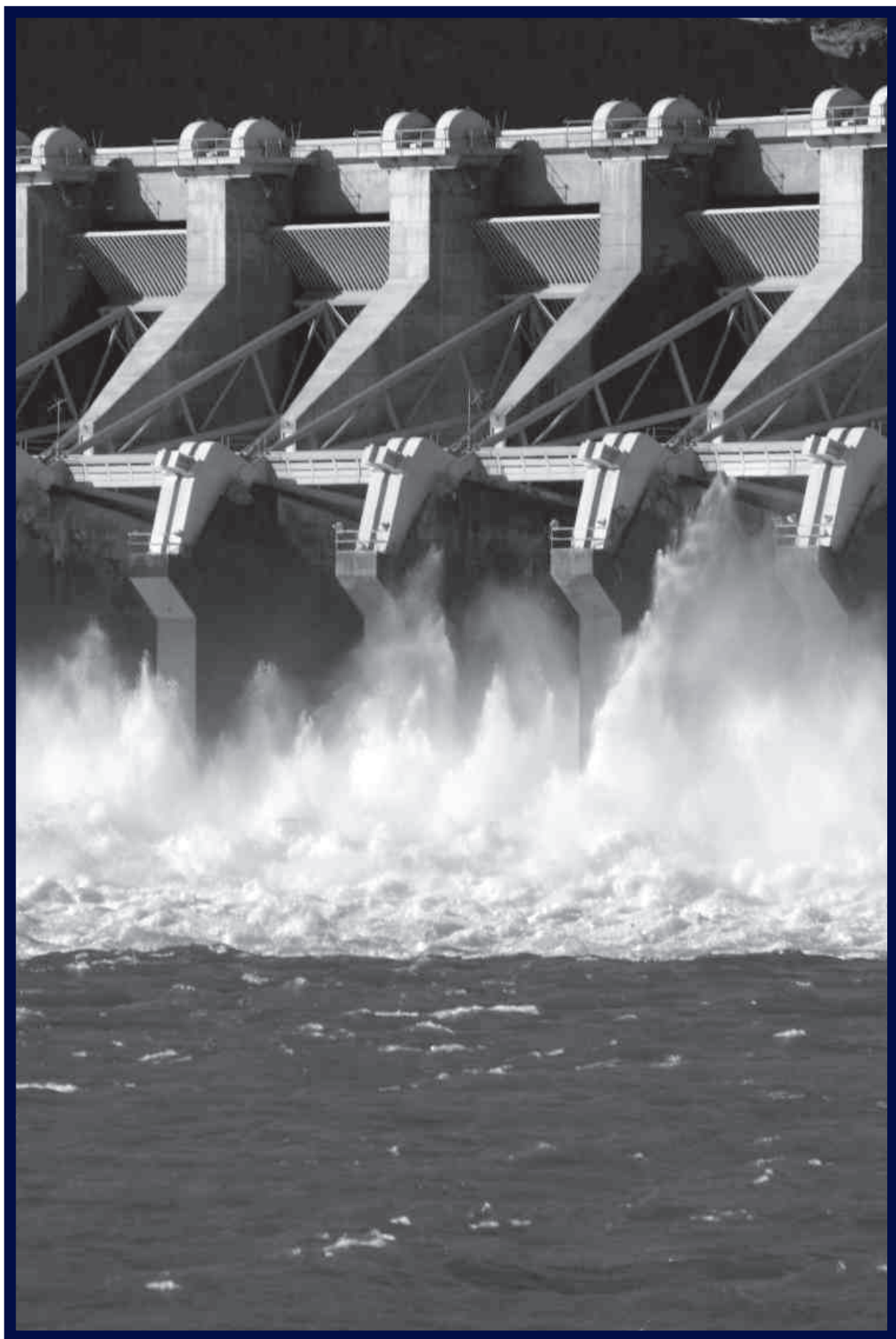
currently is phasing out. However, the host organizations for the five regional programs have determined that work should continue to provide technical assistance and outreach and education services to our states and other stakeholders.

SSEB is working with the Coalition of Northeast Governors (CONEG), the Council of Great Lakes Governors (CGLG), the Western Governors' Association (WGA) and the Pacific Regional Biomass Partnership hosted by Washington State University under the auspices of The National Biomass Partnership (NBP). The NBP is a union of the five organizations and their long-standing regional biomass energy programs representing all fifty states, Puerto Rico, the U.S. Virgin Islands and the District of Columbia. All of these organizations are recognized nationally for their combined experience related to biomass technologies and policies. Additionally, NBP is fortunate to have the support of U.S. Congressman Jay Inslee who is dedicated to furthering the development of biomass and who recognizes the regional nature of biomass resources and energy needs. He has sponsored authorizing legislation that will support the National Biomass Partnership and the five regional host organizations to continue their important work.

This year's focus has been to facilitate partnerships among industry, government, academia



and others to advance biomass technologies in the region and nationally. SSEB has contributed in many areas, ranging from assessing the viability of technologies to evaluating business plans for power plant development to bringing interested parties together to explore joint ventures. Numerous activities include providing technical assistance and policy guidance to our member states and others in the region. With such on-going vigilance and guidance, Southern States Energy Board will continue to foster the growth and implementation of bioeconomy in the South.



Water for Energy

The nexus between water and energy production in the United States and elsewhere is emerging as a critical issue in the 21st Century. This is especially true in the western and southeastern U.S. Southern States Energy Board has actively pushed this issue to the forefront of policy makers, legislators and other key stakeholders through a series of activities.

In February 2009 SSEB participated in the overall discussion with the World Energy Council at its Roundtable on Water & Energy, focusing on the sustainability of each entity as competing uses are forecast for limited resources. The World Energy Council Clean Fossil Fuel Systems Committee meeting in Dubai, United Arab Emirates, included policies, strategies and regulatory framework discussions regarding the balancing of energy and other uses of water. In addition, challenges, barriers and technologies to reduce the energy/water footprint were explored through presentations by SSEB, among others.

In conjunction with the meeting of the World Energy Council, SSEB provided substantive assistance with a U.S. Department of Energy, Office of Clean Energy collaboration report entitled "Technology Transfer: Water and Clean Coal Technologies (2009)." The report explores the growing global challenge posed by the water/energy nexus. In the U.S., the regulatory framework is complicated and covers several areas of law, involving different regulatory authorities. Water use by clean coal technologies, including

methods of reducing water impact and water needs for new applications such as Carbon Capture and Storage (CCS), is explored in depth, as is the opportunity to transfer technology from the U.S. to other countries. The report identifies five key components of an integrated water policy and planning practice. They are: supply management, water management, energy strategy, financing strategy and public policy.

On the national stage, SSEB participated in a panel discussion at the Great Plains Energy Expo sponsored by North Dakota Senator Byron Dorgan. In the session on energy and water, the inextricable links between energy production and water uses were discussed by SSEB and other national experts in the field.



Above: Dr. Gerald Hill, SSEB Senior Technical Advisor, addresses the Great Plains Energy Expo.

Regional Electricity Resources

Today, the terms Energy Security and Climate Change are spoken almost in the same breath. A related, but less-voiced concern is that very little electrical generating capacity or transmission infrastructure has been added over the past twenty years. Generating capacity margins are shrinking while new renewable generating capacity is built in remote locations with inadequate transmission available to transfer power to load centers.

The Electric Utility Task Force, composed of Southern States Energy Board members, was established in 1997. This task force provided a regional forum for southern states to exchange knowledge and to address an ever changing electric utility industry. The body explored specific topics such as transmission projects affecting the South and grid modernization.

Since the implementation of the Energy Policy



Act of 2005, electric utility mandatory and enforceable reliability rules now reside with the federal government as opposed to states. While states have the authority for siting transmission infrastructure, the federal government can authorize siting if it is not expedited in a timely manner. With all the broadened responsibilities at the Federal Energy Regulatory Commission, there appears to be increasing movement toward regionalization.

For a number of years, the electric utility industry has experienced dramatic changes in the way business is conducted. Today, the industry is a blend of competition and regulation with a number of states operating in a competitive retail market. Electric utility customers are experiencing large price increases and potential electricity shortages. This is due in part to the rising cost of fuels and the expiration of rate caps in states that have chosen to operate in a competitive market.

SSEB has been an active participant in several regional and national dialogues addressing these and other related issues. These conversations include representatives from a number of stakeholder groups, including state and federal regulatory commissions, electric utility executives, academicians, financial entities and others.

In February of 2008, SSEB participated in public discussions and made a presentation to the American Energy Futures subcommittee on

electrical transmission and distribution for The National Academies in Washington, D.C. SSEB's unique perspective provided valuable insight into issues of continued, high reliability transmission and generation supply in the southeast.

Likewise, the outlook for regional electricity planning was a key component of the Southeast Regional Electricity Planning dialogue in New Orleans this past November. This group of state energy agencies, utility and environmental regulators, governors' staff and legislative bodies involved in electricity system planning explored strategies to maximize regional electricity resources through interstate and intrastate cooperation.

In December 2008, SSEB participated in a panel discussion at the Energy Policy Leadership Summit with utility commissioners from across the nation, among others. This discussion included an overview of the state executive and legislative landscape regarding energy and electricity policy following the 2008 elections.

At the Utility Economic Development Association Winter Forum in February, 2009, SSEB provided input into these issues alongside Florida Lieutenant Governor, Jeff Kottkamp, and industry representatives. Clearly, regional electricity resources and transmission issues will continue to play a large role in the work SSEB supports.

Transuranic Waste Transportation

SSEB's Transuranic (TRU) Waste Transportation Working Group continues to work closely with the Department of Energy (DOE) to clean-up Cold War era contaminants from national laboratories and other sites. These contaminants, known as TRU waste, are generated from the production of nuclear weapons. Most TRU waste consists of solid items such as protective clothing and gloves, rags, lab instruments and equipment, as well as other items that have become contaminated by transuranic isotopes.

It is the mission of the TRU Working Group to develop policies and procedures to safely transport shipments of TRU waste thru the southern region en route to disposal at the Waste

Below: Waste handler in an underground active panel unloads a waste transporter using a Loran fork lift attachment.

Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The establishment of the TRU Working Group is possible through an ongoing cooperative agreement with DOE's Carlsbad Field Office (CFO). TRU Working Group members are gubernatorial appointees who represent a variety of disciplines including transportation planning, emergency response and radiological health.

Oak Ridge National Laboratory (Tennessee) and Savannah River Site (South Carolina) contain the majority of the South's TRU inventory but waste is stored also at several small quantity sites in the northeastern part of the country. The location of these TRU waste sites makes our region a major transportation corridor for WIPP disposal, and thus, SSEB annually issues subgrants of nearly \$2 million to those states impacted by the routes of these shipments. This funding supports emergency response preparedness activities, equipment purchases, public outreach programs, shipment tracking and other planning in each state.

This year was highlighted by numerous success stories in regard to meeting program objectives. The Oak Ridge National Laboratory celebrated an inaugural achievement on February 26th by sending the first shipment of remote-handled (RH-TRU) waste from its site to WIPP. The Savannah River Site (SRS) achieved significant milestones with the completion of its first RH-TRU shipment in April and the 1,000th contact-





Left (Left to Right): Ms. Denise Brooks, Texas, Mr. Elgan Usrey, Tennessee, and Mr. Matt McKinney, Kentucky, at SSEB's tour of the Waste Isolation Pilot Plant.

Below (Left to Right): Mr. Casey Gadbury, National TRU Program (NTP) Director and Recovery Act Project Manager, Mr. Bill Mackie, Carlsbad Field Office, NTP, Institutional Affairs Manager

handled (CH-TRU) shipment in June. The CH-TRU shipment marks the eighth year of a SRS transportation campaign without incident. SRS made its first shipment of TRU waste to WIPP in May 2001 and since has transported over 28,200 55-gallon drums to the geologic repository.

In addition, the TRU Working Group held its Spring Meeting in Carlsbad, New Mexico, where members received updates and information from DOE and other federal officials. The following day the group participated in a tour of the WIPP site, including the underground waste disposal facility. Lastly, a WIPP Counties Meeting for the emergency responders who comprise the corridor through Georgia was held on June 25, 2009, in Augusta, Georgia.



Above: A waste transporter en route to an active panel with contact handled waste.

Left: SSEB's TRU Working Group at the Waste Isolation Pilot Plant



Spent Nuclear Fuel

In 1994, SSEB's support was solicited by the Department of Energy (DOE) to partake in the planning efforts for the transport of two urgent-relief shipments of spent fuel from foreign

countries to the Savannah River Site (SRS). The origins of these shipments are connected to the "Atoms for Peace" program of the 1950's. Dur-



President Eisenhower with five of his top advisers, whom he summoned to discuss his Atoms for Peace program, January 13, 1956. (Photo: Eisenhower Presidential Library & Museum)

ing this time frame, the U.S. provided assistance to foreign countries regarding the peaceful application of nuclear technologies pending their agreement not to develop nuclear weapons. To further reduce the chance of nuclear proliferation, the U.S. agreed to take back and manage the spent fuel from the reactors overseas, in addition to assisting the foreign entities in minimizing and eventually eliminating the use of highly enriched uranium in their programs worldwide. After completion of the urgent-relief shipments, DOE issued a 1996 Record of Decision which formalized a policy for the receipt of this fuel to either SRS or the Idaho National Laboratory (INL), based on its composition.

To achieve the goals of this program, SSEB formed two committees: the Foreign Research Reactor Spent Nuclear Fuel Transportation Working Group and the Cross-Country Transportation Working Group (CCTWG). The Foreign Fuels Working Group is composed of personnel from various state agencies in South Carolina. The members assist DOE with the domestic transportation operations to safely transport the fuel to SRS. The CCTWG membership consists of the states of South Carolina, Georgia, Tennessee and Kentucky. Their charge is the same as the aforementioned group except that it involves the movement of a different fuel type to INL. Both committees are enlisted in DOE's planning effort to successfully carry out a 23-year shipping campaign (1996-2019), under which the U.S. would

accept up to 19.2 metric tons of spent nuclear fuel from research reactors all over the world.

The overwhelming majority of these shipments enter the United States via the Charleston Naval Weapons Station at a rate of about two per year. As we enter the thirteenth year of the campaign, 38 shipments have arrived in the U.S. through our region. The most recent shipment was received at SRS in May 2009.



Savannah River Site operator works with a fuel cask from Denmark at the site's Receiving Basin for Offsite Fuels.

High Level Radioactive Waste

The Southern States Energy Board continues to be at the forefront of the nation's nuclear renaissance and is active in the debate regarding nuclear power and what role it will play in our country's energy portfolio. The past year has been a very dynamic one, presenting challenges and opportunities in this area.

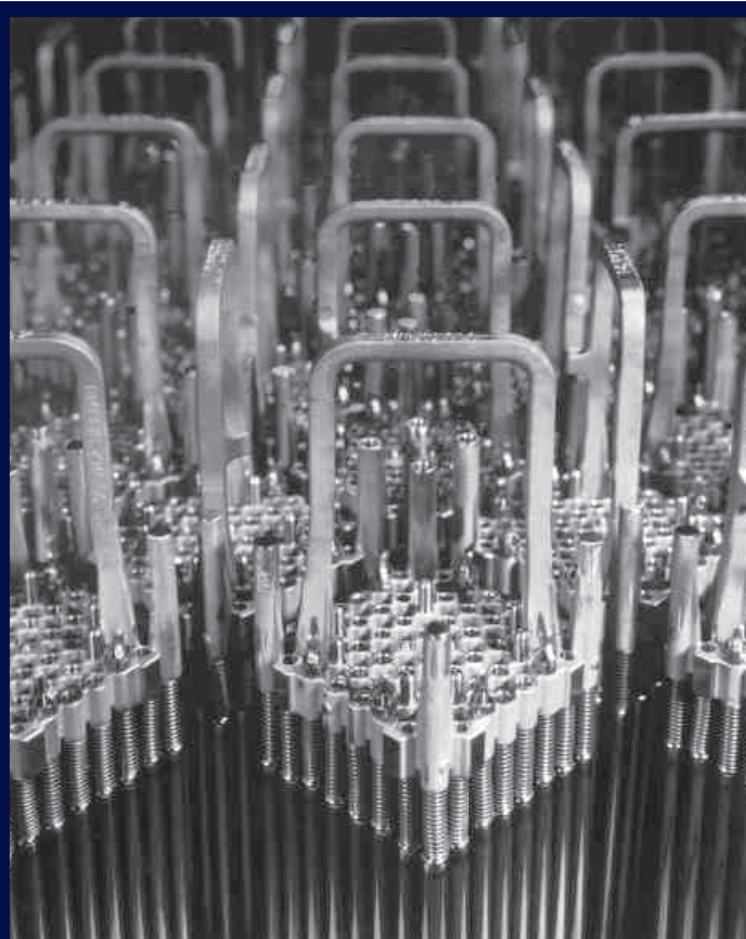
During this time, SSEB has continued to provide a voice for its members through the SSEB Radio-

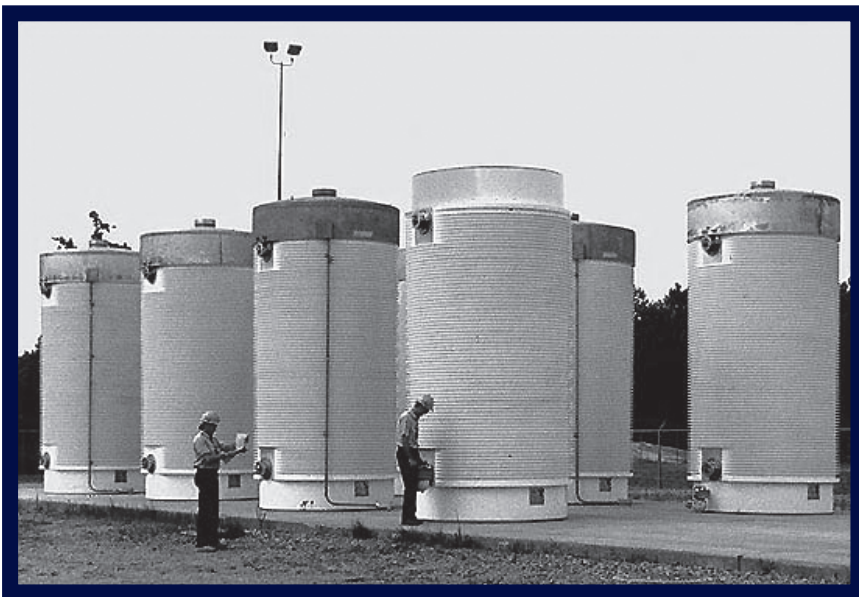


active Materials Transportation Committee. This group works as a vehicle for communicating the southern states' perspective on policy to the U.S. Department of Energy (DOE). The committee focuses primarily on those issues related to nuclear power and transportation of the nation's spent fuel and high-level radioactive waste. Furthermore, the body, whose membership includes regional, gubernatorial-ly-appointed state emergency response plan-

Above: High energy beta particles from spent nuclear fuel immersed in water gives rise to a blue glow known as Cerenkov radiation. (Photo: Savannah River Site)

Left: Fuel bundles arranged into a matrix for insertion into a nuclear reactor. (Photo: Regional Development Alliance, Inc.)





Left: Nuclear power plant employees monitor the radiation level of spent fuel stored on site in dry casks. (Photo: U.S. Nuclear Regulatory Commission)

ners, radiological health professionals and other state agency officials, has been engaged with the DOE's Office of Civilian Radioactive Waste Management (OCRWM), addressing issues relevant to the development of Yucca Mountain, the first federally designated repository for spent fuel and high-level radioactive waste, located approximately 100 miles north of Las Vegas, Nevada.

However, with the new administration, there has been a fundamental shift away from Yucca Mountain and a push to seek alternatives to that plan. Senators Harry Reid and John Ensign have provided legislation to form a blue ribbon commission that would be given two years to set a new proposal for management of highly radioactive materials. Currently, the nuclear waste is stored at power plants and at government facilities in 39 states. All nine members of this panel will be chosen by Congress, with five members named by Democrats and the remaining four selected by Republicans. These members will be tasked with assessing research on nuclear waste reprocessing and other advanced methods of managing the material. The Commission will also examine possible cost sharing between the government and private industry as research progresses, and whether the nuclear waste disposal program

should be moved from the Department of Energy to a government corporation.



Above: Spent fuel storage pool houses radioactive fuel after discharge from the reactor core. (Photo: AP Photo/Robert Bower, Post Register)

Radiological Emergency Response

Formed in 1972, the Southern Emergency Response Council (SERC) exists as a formalized emergency response agreement among the southern region to respond in case of a radiological incident. SERC representation is comprised of the 14 signatory states of the Southern Agreement for Mutual State Radiological Assistance, including Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia.

The Southern Agreement for Mutual State Radiological Assistance is implemented through the Southern Mutual Radiation Assistance Plan (SMRAP). Created as a blueprint for coordinating radiological emergency assistance capabilities among participating states in the southern region, SERC representatives review, revise and administer SMRAP on an annual basis to reflect changes in state emergency response capabilities and equipment. This document outlines the mutual aid agreement, the implementation process, emergency response contacts and available state resources.

An annual SERC meeting is held by the Southern



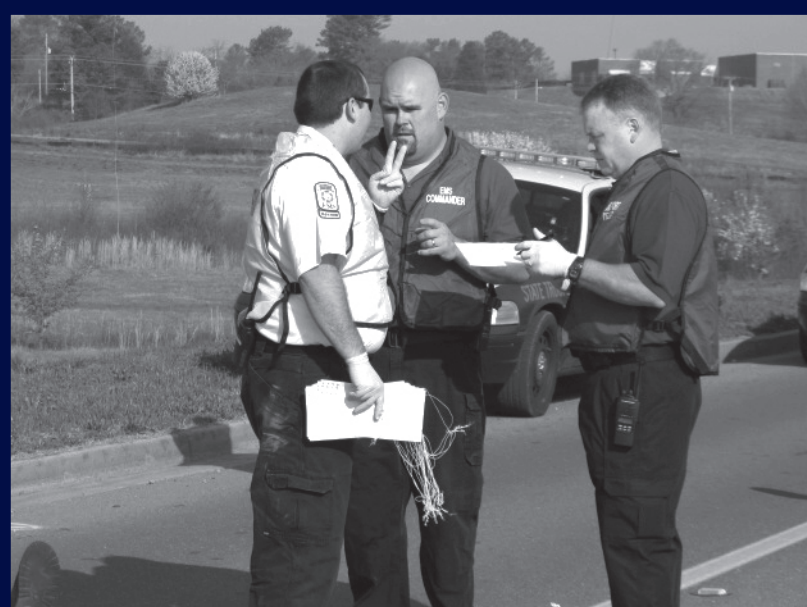
Above: Firefighters respond to exercise accident scene and stabilize "crash victim" for transport to the hospital. (Photo: Georgia Emergency Management Agency (GEMA))

States Energy Board to provide members with a forum to discuss matters related to SMRAP. Furthermore, SSEB operates as the regional coordinator for the testing of SMRAP activation procedures during joint power plant exercises between the states. The group convened August 18-21, 2008, in Columbus, Ohio to ratify SMRAP for 2008. The states will meet again in September 2009 in Baton Rouge, Louisiana, to update SMRAP.



Above: Employees from the Georgia Department of Natural Resources and the Georgia Emergency Management Agency serve as evaluators for the radiological transportation exercise. (Photo: GEMA)

Right: Exercise “crash victim” in close proximity to TRUPACT-II transport trailer. Vehicle placard in background denotes radioactive materials shipment. (Photo: GEMA)

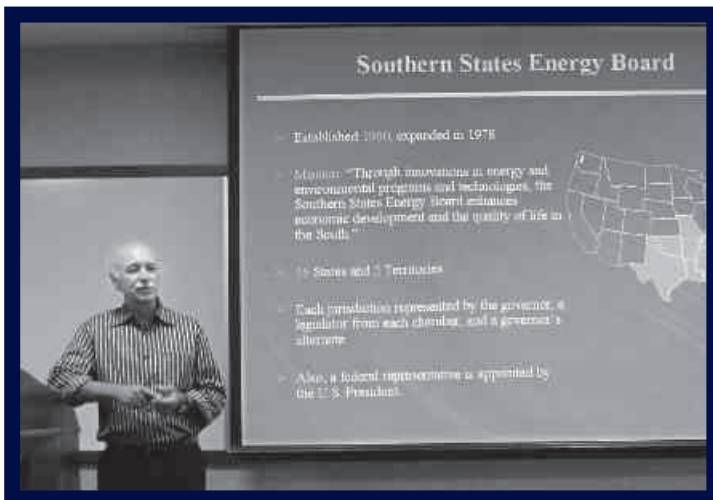


Left: Emergency response personnel convene to evaluate the incident and formalize strategy. (Photo: GEMA)

Outreach and Education

For the second year, SSEB participated in a carbon management teacher training session in Atlanta, Georgia. The Keystone Center developed and taught the two-day teacher workshop entitled CSI: Climate Status Investigations. This course presented a balanced, non-biased, comprehensive and interdisciplinary approach to the study of global climate change. By teaching educators strategies to identify and remove their own bias in order to facilitate student inquiry, teachers were introduced to a new way of thinking about their approach to contentious issues. The program improved both the understanding of global climate change among educators and students and enhanced decision-making abilities.

The Southern States Energy Board's keynote



Above: SSEB's Gary Garrett leads a Carbon Capture and Storage training class conducted by SSEB for middle school teachers.

presentation included an overview and updates concerning the SECARB partnership and projects. Middle school teachers left the class having learned the basics of climate change, critical issues, and mitigation techniques to deal with carbon dioxide emissions, including geologic sequestration. The knowledge and materials from the workshop will be used in science classrooms at their respective schools to teach middle school students the key factors and issues involved with carbon management.

Left: Participants in the Climate Status Investigations training



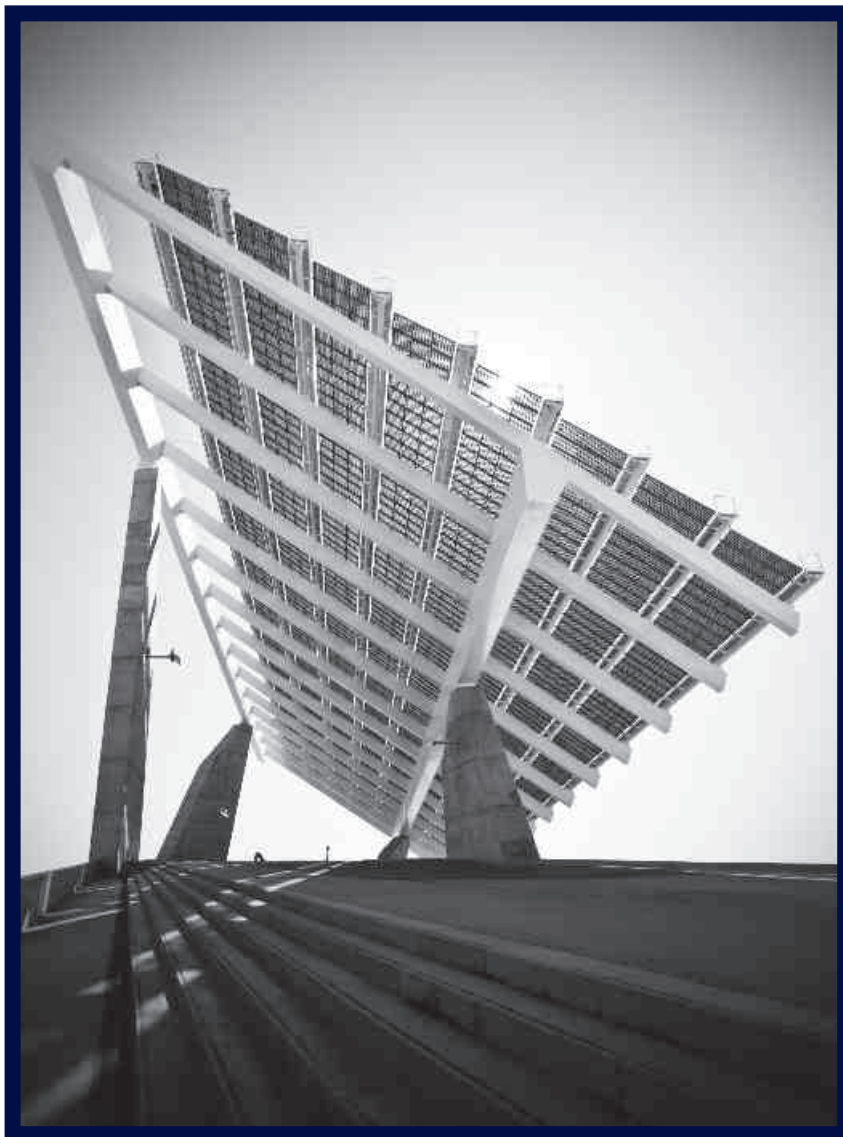
Energy & Environment Legislation

The Southern States Energy Board's annual Legislative Digest is a compendium of legislation passed by the Board's 18 member states and territories during the current legislative session. For decades, SSEB has published the Digest as a research tool and reference guide for state legislators and their staffs to develop and pass laws in their respective states and territories.

Many of the laws passed this year strive to make America safe by securing energy independence. Member legislators found themselves at the crossroads of new energy policies, attempting to make current energy sources cleaner, developing alternative sources of energy, and all the while maintaining and preserving the environment.

The 2009 legislative sessions in the southern states covered over 650 energy and environmental bills that were either pending or passed. Energy legislation focused on alternative energy development, coal and minerals, energy efficiency and natural gas and petroleum. Environmental measures addressed hazardous waste and substance management, land management and conservation, solid waste and water quality and pollution control. An analysis of the leg-

islative activity in the SSEB member states shows the region remains committed to protecting our natural resources and environmental quality.



Walking the Walk

At Southern States Energy Board, not only do we approach our work with a sincerity which has allowed our organization to grow and prosper over the last 49 years, but we believe also in the premise of what we do. We practice energy efficiency, conservation and environmental responsibility in our words and deeds.

For years, SSEB has recycled and conserved energy by encouraging workers to take advantage of flexible scheduling, thereby reducing time spent travelling to and from work in their vehicles. Now, the organization has stepped up the call to help steward our planet by taking every opportunity possible to retrofit and upgrade the organization's premises.

Recently added low-emittance (Low-E) windows have both reduced our heating and cooling bills, and subsequently, our carbon footprint. Low-E window coatings are thin, metal or metallic oxide layers deposited on a window surface primarily to suppress the heat flow through the glazed window unit. Coating the inner glass surface with a low-emittance material between the glass layers, blocks a significant amount of this radiant heat transfer, which lowers the heat flow through the window. Low-E coatings are transparent to visible light, but very visible in terms of the effect they have on utility bills.

Our lighting and appliances have become more efficient as well. Old lighting units have been replaced with new, energy efficient electronic ballasts and energy efficient fluorescent bulbs, and our heating and copying units are ENERGY STAR certified.

Looking forward, this year, SSEB will make use of the services of Green Energy Solutions to further reduce our carbon footprint by employing three strategies. First, we will be more than doubling our building insulation, which should provide significant savings. Second, radiant barriers will be installed in the attic on the underside of the rafters. These barriers are highly reflective, and lowly emissive, allowing them to greatly reduce the amount of the roof's radiant heat that falls onto cooler attic surfaces, such as floors and air ducts. The third energy saving solution is the addition of an electric capacitor to the SSEB breaker box. This will allow us to "smooth" our energy use, by storing excess energy and regulating it for use in peak times and situations. These three changes combined are expected to cut our utility needs by approximately 25 percent. And, as always, we will continue to look for cost effective ways to further minimize our carbon footprint and use our resources responsibly.



Sources of Support

The Southern States Energy Board's core funding comes from annual appropriations from the 18 member states and territories. Each member's share is computed by a formula written into the original Compact. This formula is comprised of an equal share, per capita income and population. The Board has not requested an increase in annual appropriations in more than 20 years. The Compact authorizes the Board to accept funds from any state, federal agency, interstate agency, institution, person, firm or corporation provided those funds are used for the Board's purposes and functions. This year, additional support was received for special projects from research grants, cooperative agreements and contracts from the U.S. Department of Energy and U.S. Department of Agriculture.

Additionally, the SSEB Carbon Management Program and SECARB's industry associates provide an annual monetary contribution of \$10,000 per member to support these activities. Public Partners may join for \$500 per non-profit organization, university or national laboratory. Allocations of these contributions are at the discretion of the Southern States Energy Board to support the program. Industry Associates are provided with regular updates of events and progress, and participate in an annual stakeholder meeting held in Atlanta, Georgia. For a current list of industry associates, as well as all team members, please visit www.secarbon.org.

In addition, SSEB maintains an Associate Members program comprised of industry partners who provide an annual contribution of \$3000 to the Board. Membership includes organizations from the non-governmental sector, corporations, trade associations and public advocacy groups.

The Associate Members program provides an opportunity for public officials and industry representatives to exchange ideas, define objectives and advance energy and environmental planning to improve and enhance the South's economic and environmental well-being.

State Appropriations

Alabama	\$32,572	North Carolina	\$37,042
Arkansas	\$31,027	Oklahoma	\$32,512
Florida	\$47,212	Puerto Rico	\$25,597
Georgia	\$35,782	South Carolina	\$31,372
Kentucky	\$32,197	Tennessee	\$34,267
Louisiana	\$33,817	Texas	\$55,402
Maryland	\$37,192	U.S. Virgin Islands	\$25,297
Mississippi	\$29,077	Virginia	\$38,362
Missouri	\$36,247	West Virginia	\$28,732

Associate Members Program

During the past year, the Southern States Energy Board Associate Members, under the chairmanship of Mr. Jim Kibler, AGL Resources, focused on the impact of federal climate and energy policy. In particular, the members gave attention to the Stimulus funding and how state energy programs would benefit. In conjunction with these issues, the group provided insight on the national dialogue on climate change and carbon management.

Other areas of emphasis included appraising the legislative issues affecting the natural gas industry and, specifically, natural gas markets. Associate members also addressed the prevailing issues of energy security, grid modernization, low income home energy assistance and weatherization, air quality, energy workforce training and education, water and energy interdependence, energy efficiency and renewable energy, advancing technologies and emerging industries as well as state energy and environment legislation in the southern states.

The Associate Members provide the Southern States Energy Board with a valuable perspective devoted to fostering sound and balanced approaches to economic development and sustainable environmental practices. Founded in 1984, the Associate Members represent the region's leading energy and technology industries.

Associate Members

AGL Resources
Alpha Natural Resources
American Coalition for Clean Coal Electricity
American Electric Power
Arch Coal, Incorporated
Big Rivers Electric Corporation
ChevronTexaco Corporation
Coal Utilization Research Council
Colonial Pipeline Company
Dominion
Eastern Coal Council
Edison Electric Institute
Entergy Services
Fibrowatt, LLC
Florida Power & Light Company
Integrated Utility Services, USA, Inc.

Kentucky Coal Academy
National Coal Council
National Mining Association
Nuclear Energy Institute
NRG Energy
Peabody Energy
Praxair, Incorporated
Progress Energy
Range Fuels, Inc.
Ruff & Tuff Electric Vehicles
SCANA Corporation
Shell Oil Company
Santee Cooper
Southern Company
TECO Services, Incorporated
TXU Energy
Tennessee Valley Authority

SECARB Phase II and Phase III Partners

July 1, 2008 to June 30, 2009

Cost Sharing Partners

Advanced Resources International
Alpha Natural Resources
Amvest Gas Resources, Inc.
AMVEST Oil & Gas
Arch Coal
Augusta Systems, Inc.
Bright Energy, Inc.
CDX Gas, LLC
Consol Energy
Dart Energy Corporation
Dart Oil & Gas
Denbury Resources, Inc.
Dominion Resources, Inc.
Eastern Coal Council
Electric Power Research Institute (EPRI)*
Equitable Production Company
F.D. Robertson
Geological Survey of Alabama*
GeoMet
Interstate Oil & Gas Compact Commission (IOGCC)
Kentucky Energy & Environment Cabinet-
Division of Energy Development and
Independence
Marshall Miller & Associates
Massachusetts Institute of Technology

McJunkin Appalachian Oil Field Supply
Company
Mississippi State University (Institute for
Clean Energy Technology)
Natural Resource Partners
Penn Virginia Operating Company, LLC
Penn Virginia Resources
Petron Resources
Piney Land Company
Pocahontas Land Corporation
Praxair
RMB Earth Science Consultants Ltd.
Schlumberger
Smith Energy
Southern Company
Teco Coal Corporation
University of Alabama
University of Kentucky (KY Geological
Survey)
University of Texas, Jackson School of
Geosciences & Bureau of Economic
Geology*
Virginia Polytechnic Institute & State
University (VA Center for Coal and
Energy Research)*
West Virginia University

**SECARB Field Test Site Lead Organizations, Phases II and III*

Industry Associates

American Coalition for Clean Coal
Electricity
ARCADIS US
Baker Hughes, Inc
Blue Source
BP/Alternative Energy
CSX Transportation
ExxonMobil Production Company
Halliburton
Hilcorp Energy Company
Old Dominion Electric Cooperative
Praxair, Inc.
RenTech Development Corporation
Southern Natural Gas & El Paso
Exploration & Production
Tennessee Valley Authority

Special Project Participants

Duke Energy
Old Dominion Electric Cooperative
Progress Energy
Santee Cooper Power
South Carolina Electric & Gas/SCANA
Southern Company

Public Partners

Clemson University
Florida Municipal Electric Association, Inc.

Site Hosts

Alabama Power Company, a Southern
Company
CNX Gas
Denbury Resources, Inc.
Mississippi Power Company, a Southern
Company
Southern Natural Gas & El Paso
Exploration & Production

***For a complete list of all SECARB team
members (Phases I, II and III), please
visit www.secarbon.org.***

The Staff

Kenneth J. Nemeth
Executive Director and Secretary to the Board
nemeth@sseb.org

Kathryn A. Baskin
Managing Director
baskin@sseb.org

Leigh T. Parson
Grants and Accounting Specialist
parson@sseb.org

Sally L. Bemis
Staff Assistant
bemis@sseb.org

Kathy A. Sammons
Director, Business Operations
sammons@sseb.org

Cloyce B. Brackett
Policy Analyst, Nuclear Programs
brackett@sseb.org

Kimberly A. Sams
Assistant Director, Geoscience Programs
sams@sseb.org

Joan T. Brown
Senior Accounting Specialist
brown@sseb.org

Canissa N. Summerhill
Special Assistant, Program Operations
summerhill@sseb.org

Monica A. Fluellen*
Computer Support Specialist
fluellen@sseb.org

Christopher U. Wells
Assistant Director, Nuclear Programs
wells@sseb.org

Gary P. Garrett
Senior Technical Analyst
garrett@sseb.org

Project Staff
Phillip C. Badger
SSEB Technical Manager, Bioenergy Program
pbadger@bioenergyupdate.com

M. Patrick McShane
Legal & Regulatory Analyst
mcshane@sseb.org

Gerald R. Hill, Ph.D.
SSEB Senior Technical Advisor
hill@sseb.org

Polly L. McKinney
Assistant Director, Communications
mckinney@sseb.org

Mark A. Shilling
Special Counsel
mark.shilling@govt-affairs.

**Currently serving in the United States Army in Afghanistan*

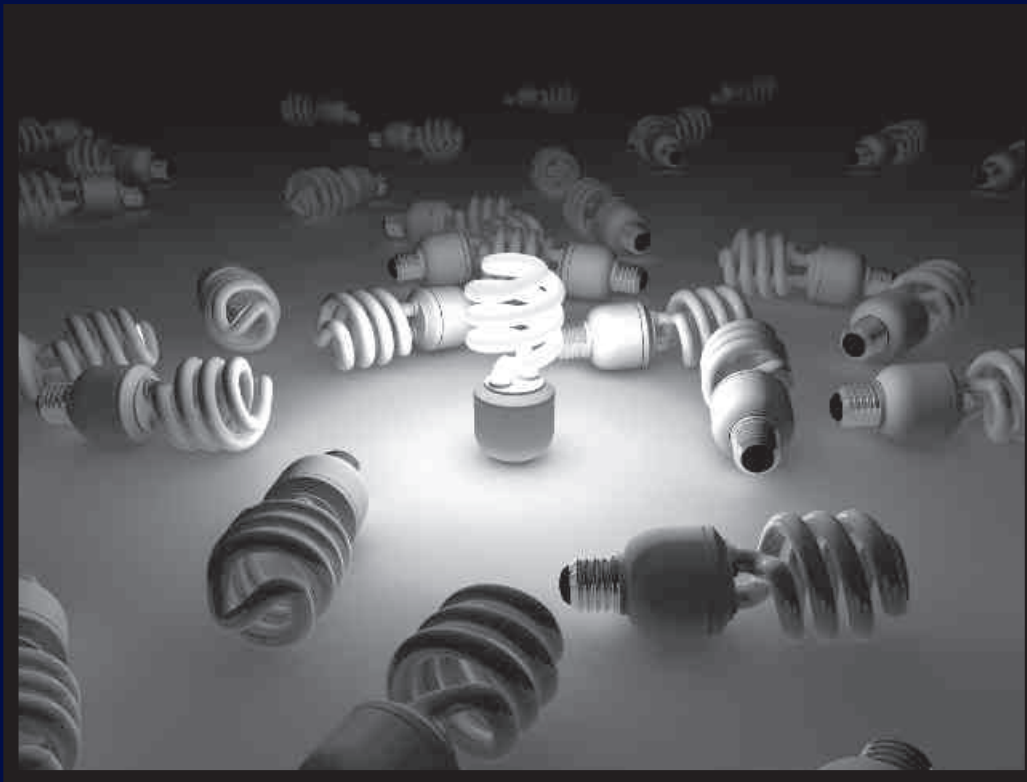


Southern States Energy Board

6325 Amherst Court
Norcross, Georgia 30092
(770) 242-7712
(770) 242-9956 fax1
(770) 242-0421 fax2
website: www.sseb.org

*Join us next year to celebrate
Southern States Energy Board's
50th Anniversary*

Details to follow...



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(770) 242-9956 fax1
(770) 242-0421 fax2
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